

## Remarks

### Claim Rejections – 35 USC 102 - McEwen

1. Previous independent claim 1 (and its dependent claims 4 to 6, 11 to 13), independent claim 17 (and its dependent claim 19) and previous independent claim 21 have been rejected under 35 USC 102(b) as being anticipated by McEwen (US332728).
2. Independent claim 1 has now been limited to the feature of its previous dependent claim 14 so as to overcome this rejection of claim 1. Claim 1 has also been amended further to specify what is meant by “to register the shell in the directions of the four extents.”
3. Similar amendments have been made to independent claim 17. Although claim 17 is independent, it falls within the scope of claim 1, and Applicant therefore submits that amended claim 17 is also not anticipated by McEwen.
4. Independent claim 19 has similarly been amended.
5. Amended claim 19 is distinguished from McEwen *inter alia* by the feature:

... the shell having a registration portion shaped to register the shell with respect to the person's ankle bone, the registration portion having portions for engaging with the protruding part of the person's ankle bone from below, from in front of, from behind and from above the person's ankle bone for registering the shell in the directions of the four extents with respect to the person's ankle bone ...
6. In McEwen, the slot between the ribs E could perhaps be arranged, if the brace were suitably sized, to register the ankle support in upward, forward and rearward directions with respect to the person's ankle bone. However, if not suitably sized, the ankle support of McEwen would be registered with respect to the person's leg by the heel band E<sup>1</sup> and the instep band E<sup>2</sup>. Moreover, when considering the distinction of claim 19 over McEwen, the slot of McEwen has parallel sides above its semi-circular lower end; there is nothing in the McEwen arrangement which is capable of engaging the protruding part of the person's ankle bone from above, whatever the size of the ankle support of McEwen.
7. Amended claim 19 is furthermore distinguished from McEwen *inter alia* by the feature:

... the shell being devoid of any feature for extending beneath the person's heel for non-adjustably registering the shell vertically with respect to the person's leg ...

8. McEwen has an instep band E<sup>2</sup> which does extend beneath the person's heel for registering the shell vertically with respect to the person's leg, but the instep band E<sup>2</sup> is not adjustable.

9. Applicant therefore submits that none of the independent claims, and therefore none of their dependent claims, is anticipated by McEwen.

#### **Claim Rejections – 35 USC 103 - McEwen**

10. Previous claims 2, 3, 7, 9, 10, 15, 16, 18 and 22 have been rejected under 35 USC 103(a) as being obvious over McEwen.

11. As discussed above, the previous independent claims 1, 17 and 21 have been limited to the feature of previous claim 14, to which no obviousness rejection over McEwen was made. Applicant therefore assumes that no obviousness rejection in view of McEwen will be made in respect of the amended independent claims and their dependent claims.

12. The ankle brace shells of amended claims 1 and 21 and the ankle brace of amended claim 19 are arranged to be registered with the person's ankle bone in all four directions: up, down, forwards and rearwards. This has the advantage that the shells and ankle brace of a particular size can be used to proper effect with a range of sizes of ankle. By contrast, the ankle support of McEwen is designed to be registered with the back of the person's heel with the heel band E<sup>1</sup> and the person's instep with the instep band E<sup>2</sup>. Depending on the position of the person's ankle bone relative to the rear of their heel and their instep, the ankle support of McEwen will or will not be positioned properly with respect to the person's ankle bone. Indeed, it appears to Applicant to be the case that the lower end of the slot of McEwen is designed so that the ankle support of McEwen does not interfere at all with the person's ankle bone.

#### **Claim Rejections – 35 UCS 103 – Wilkerson in view of Nelson**

13. Previous independent claim 1 (and its dependent claims 2 to 7, 9 to 16), independent claim 17 (and its dependent claims 18 and 19) and independent claim 21 (and its dependent claim 22)

have been rejected under 35 USC 103(a) as being obvious over Wilkerson (US4590932) in view of Nelson (US4527556).

14. In the first office action, various claims were rejected as being anticipated by Wilkerson. In response to the first office action, Applicant argued three points of distinction of the present invention over Wilkerson:

- (A) the shell of the invention, compared with the pad of Wilkerson (paragraph 3 of the remarks in the previous response);
- (B) the shell of the invention being semi-rigid, compared with the pad of Wilkerson being of compressible foam (paragraph 4 of the remarks in the previous response); and
- (C) the registration portion of the shell of the invention registering it in the downwards direction with respect to the ankle bone, compared with the absence of this feature in Wilkerson (paragraph 5 of the remarks in the previous response).

15. In the second office action, Nelson has been cited to illustrate the use of semi-rigid materials in ankle supports. Applicant assumes that reference is being made to the stirrup 58 (Figure 6) and brace 59 (Figure 5) of Nelson. The second office action has omitted to comment on Applicant's previous assertions regarding the registration portion.

16. Wilkerson relates generally to an ankle-sprain edema-control boot assembly (its title). It is "... for applying compression to control edema ..." (col. 1, ll. 65-66). The object of Wilkerson is "... to prevent fluid from accumulating to a substantial degree in the area of trauma and to reverse whatever initial accumulation has occurred" (col. 3, ll. 5-7). Wilkerson states, "It is important to provide an upwardly open channel for release of edema in that direction during the use of the pad" (col. 3, ll. 24-26). Wilkerson therefore provides the bifurcated, compressible foam pad 12. The pad of Wilkerson is therefore primarily providing an oedema control function, not an ankle bracing function.

17. By contrast, Nelson provides an ankle bracing function. It is a "support brace" (its title). It is "... an ankle support for use in supporting an ankle bone and ankle joint" (col. 1, ll. 50-51).

18. The examiner has stated that, in view of the teaching of Nelson, it would have been obvious to make the ankle support of Wilkerson with semi-rigid material in order to provide a desired level of support for a wearer. Applicant submits otherwise. Applicant submits that the skilled person would see the compressible nature of the foam pad of Wilkerson as being important to the oedema-

controlling function and would not contemplate substituting a semi-rigid material for the compressible material.

19. Applicant points to col. 5, ll. 21-30, of Wilkerson, where it is stated, “It may be desirable to include a rigid plastic stirrup within the assembly if the sprain is particularly severe and joint restriction is necessary. Such stirrups consist of two upwardly extending legs which are arranged on either side of the patient's ankle and a connecting lower portion which is disposed beneath the sole of the foot. Such a stirrup would be applied directly over the boot element 17 and the toe and ankle straps 31A and 31B and the intermediate strap 34 would be wrapped around the stirrup.” Applicant therefore notes that Wilkerson can provide an ankle bracing function in addition to its oedema-controlling function, and that there is therefore no reason for the skilled person to look to Nelson or anywhere else if it were desired to provide Wilkerson with an ankle bracing function.

20. Furthermore, similar comments to those discussed in relation to McEwen apply in respect of distinction “C” mentioned in paragraph 14 above. The slot between the legs 13,14 in Wilkerson has parallel sides above its semi-circular lower end; there is nothing in the pad 12 of Wilkerson which is capable of engaging the protruding part of the person’s ankle bone from above. There is nothing in Nelson to suggest any modification of the pad of Wilkerson so that it does engage the protruding part of the person’s ankle bone from above.

21. In summary, Applicant submits that it would not be obvious to combine the teachings of Wilkerson and Nelson, but even if those teachings were combined, they fail to provide the features of the registration portion recited in amended independent claims 1, 17 and 19 and therefore fail to render any of the claims obvious.

#### **Neal (US5000195)**

22. Figures 3 and 4 of Neal apparently show the shape of slot contemplated by the present invention. However, the slot is aligned with the back of the leg, not the ankle bone.

#### **Brauer (US660885)**

23. Brauer has been considered but is not thought to be relevant to the patentability of the amended claims.

## Summary

24. Having dealt with all of the objections and rejections raised in the second office action, applicant respectfully requests favourable reconsideration of this application which is now considered to be in order for allowance.

Respectfully submitted

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